

PIL403A Design an urban permaculture system

This competency standard covers the process of designing an urban permaculture system. It requires the ability to negotiate with clients to develop a permaculture design brief, provide design solutions, select plants and animals and oversee site development. It requires knowledge of permaculture systems, permaculture plants and animals used in permaculture systems and soil preparation.

The preparation of a permaculture design is likely to be undertaken without supervision. Responsibility for the work of others may be involved. It requires a broad range of permaculture skills and involves the application of underpinning knowledge with depth in some areas such as plant and animal selection, soils, permaculture design principles, drafting techniques and communication skills.

Element	Performance Criteria
1 Develop a design brief	1.1 Client is consulted to establish purpose and requirements of design. 1.2 Design brief is developed and agreed in consultation with the client. 1.3 Cost structures and timelines are negotiated with the client.
2. Undertake a site analysis	2.1 Base plan of site is prepared or obtained from the client or other sources. 2.2 Physical elements and features of the site are recorded on the base plan. 2.3 Assessment of soil, topography, aspect (especially in relation to other built structures), existing vegetation, zones, sectors and climatic factors are recorded on the site plan. 2.4 Functional analysis of the site is completed and recorded on the base plan. 2.5 Other relevant data including scale and north point is determined and recorded on the base plan.
3 Develop a concept design	3.1 Concept plan is prepared to illustrate the location and layout of proposed site works according to the design brief. 3.2 Plant list is compiled of species and varieties suitable for the site according to design brief. 3.3 Consultation with the client is undertaken to agree on options and approaches for

		development.
	3.4	Consistent graphic style is used to present the concept plan
4	Produce a final plan	<p>4.1 Detailed urban permaculture design is produced according to the design brief.</p> <p>4.2 Design solutions and graphic representations are applied to a range of urban permaculture situations.</p> <p>4.3 Design solutions ensure that all components are placed for maximum effect and yield</p> <p>4.4 Urban permaculture plan is drafted according to permaculture design principles</p> <p>4.5 Information on the plan is relevant and precise and clearly communicates development works to be undertaken.</p> <p>4.6 Notes and specifications are included on the plan to assist in plan interpretation.</p>

Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What type of clients might be covered by this unit?	Clients may include private individuals, organisations, public bodies and community groups.
What cost structures will be considered when developing the design?	Cost structures may be developed from information provided by the client
What physical elements and features may be included on a base plan?	Physical elements and features included in a design included proposed or existing structures, buildings, water supply, irrigation and/or drainage systems, roads and paths, existing gardens, trees and other plants, topographic features, views and outlooks, climate and weather conditions, zone and sector analysis, soils characteristics, access to site, existing site use details.
What may be covered by a functional analysis of the site?	A functional analysis of the site might include all components relating to the existing or proposed use of site, pedestrian, animal and vehicle movement, water and energy sources available or proposed for the site, microclimatic notes and client requirements.

What methods may be included in **drafting** the plan Drafting may be done by hand or with proprietary software.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in this unit requires evidence that urban permaculture designs have been successfully developed according to client and industry requirements and standards. The skills and knowledge required to prepare urban permaculture designs must be **transferable** to a range of work environments and contexts. For example, this could include different design solutions for a range of commercial or private sites.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this unit are listed below:

- Elements and principles of urban permaculture design.
- Plan interpretation.
- Conventional symbols.
- Plant and animal selection.
- Drafting techniques.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, some complementary skills are required. These skills include the ability to:

- Negotiate with clients.
- Undertake a site analysis.
- Analyse zones and sectors.
- Provide urban permaculture design solutions.
- Select plants and animals.
- Develop concept and/or construction plans.
- Develop planting schedules and bills of quantity.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and

3 = perform, administer and design the process.

1. How can communication of ideas and information (2) be applied?	Communication of ideas and information can be applied through the development of concept and final design plans
2. How can information be collected, analysed and organised (2) ?	Information can be collected, analysed and organised at site inspection in field notes, on paper and on computer based plans and in a report to the client
3. How are activities planned and organised (2) ?	Activities are planned and organised with other members of the team including clients.
4. How can team work (2) be applied?	Through interaction with the client and those with specialist information relating to the design. This interaction may take place at each stage of the design process
5. How can the use of mathematical ideas and techniques (2) be applied?	Mathematical ideas and techniques can be applied in drafting concept and final design plans
6. How can problem solving skills (3) be applied?	Problem solving skills can be applied when providing design solutions
7. How can the use of technology (3) be applied?	The use of technology can be applied when measuring, drafting, printing and recording design plans.

Are there other competency standards that could be assessed with this one?

This competency standard can be assessed on its own or in combination with other competencies relevant to the job function.

For information about assessing this competency standard for consistent performance and where and how it may be assessed, refer to the **Permaculture International Ltd Course Documentation**.